

REMARKS

Responsive to the Office action mailed February 17, 2010, applicant request entry of the foregoing amendments, consideration of the following remarks and reconsideration of the rejections set forth in said office action.

Claims 12, 29 and 34-36 were rejected under 35 USC 102 as being anticipated by Kambara et al. (US 5,922,912). Applicants submit that Kambara et al. '912 fails to anticipate the present invention as currently claimed.

The present invention is directed to the use of a metal alloy containing from about 25% to about 75% copper, such as Monel®, in the construction of apparatus used for the manufacture, purification, handling and/or storage of ethylenically unsaturated monomers in the presence of an oxygen-containing gas. It was discovered that the use of such metal alloys, in the presence of the oxygen-containing gas, was effective in inhibiting polymerization of the monomer within the apparatus. The present invention does not require the addition of any copper to the system other than that provided by the presence of the copper containing metal alloy in the system apparatus. The present inventors discovered that the use of metal alloy containing from about 25% to about 75% copper, such as Monel®, effectively prevented undesirable polymerization within the equipment. Such metal alloys are easier to work with in industrially facilities than pure copper due to different properties such as weldability and strength.

Kambara et al. '912 discloses a method for the concentration of an aqueous acrylamide solution prepared by hydration of acrylonitrile or an aqueous acrylamide solution substantially free of acrylonitrile. The method makes use of a concentration apparatus, at least a part of whose solution-contacting section is made of a copper-containing material. . The concentration is conducted while introducing an oxygen-containing gas into the apparatus. Kambara et al. '912 discloses that the apparatus is preferably made of a copper-containing material to an extent of 20% or more in terms of surface area. Examples of the copper-containing material include oxygen-free copper; phosphorus-

deoxidized copper; and copper alloys such as beryllium copper, red brass and brass. The examples of Kambara et al. '912 discloses the use of copper-made Raschig rings, or where the separator inner wall was entirely made of copper (example 3). The examples of Kambara et al. '912 further disclose the addition of copper ions at a concentration of 5 ppm based on AAM or copper sulfate to the solutions being processed in the equipment. Thus, the teachings of Kambara et al. '012 are that copper ions must be incorporated into the solution being treated in the apparatus and that pure copper metal be used as a component in the apparatus in the concentration of aqueous acrylamide.

Applicants submit that Kambara et al. '912 fails to disclose each and every feature of the present invention as currently claimed and that the rejection should be withdrawn.

Claims 16-22, 24-26 and 29-36 were rejected under 35 USC 103(a) as being unpatentable over Nakahara et al. (US 2002/165407). Applicants submit that Nakahara et al. '407, fails to render obvious the present invention as currently claimed.

Applicants submit that Nakahara et al. '407 fails to disclose the use of a metal alloy containing from about 25% to about 75% copper, such as Monel [®], in the construction of apparatus used for the manufacture, purification, handling and/or storage of ethylenically unsaturated monomers in the presence of an oxygen-containing gas as set forth in the amended claims of the present application. There is no support for the examiners conclusion that the disclosure of Nakahara et al. '407 .of the use of a nickel-chromium-iron alloy having specific levels of molybdenum and cooper would obviously lead to the use of metal alloy containing from about 25% to about 75% copper, such as Monel [®].

Applicants submit that the contrary is true. Applicants submit that a person skilled in the art, in reading Nakahara et al. '407 would be directed to use alloys of the combination disclosed therein. There is not teaching motivation of direction either within Nakahara et al. that would lead to the use of a metal alloy of significantly different properties such as the one claimed in the present application directed towards acrylic acid containing systems.

In view of the foregoing remarks, applicant respectfully submits that claims 16, 18-22, and 25-36 of the present application are in condition for allowance and prompt favorable action is solicited.

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Respectfully submitted,

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